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=> file medline caplus embase biosis biotechds scisearch
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                                                 ENTRY    SESSION
FULL ESTIMATED COST                               0.21       0.21

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FILE 'BIOTECHDS' ENTERED AT 11:16:38 ON 09 MAY 2003
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FILE 'SCISEARCH' ENTERED AT 11:16:38 ON 09 MAY 2003
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=> s (SAM synthase or s-adenosylmethionine synthase) and (bioS1 or bioS2 or bioS3)
L1            0 (SAM SYNTHASE OR S-ADENOSYLMETHIONINE SYNTHASE) AND (BIOS1 OR
                BIOS2 OR BIOS3)

=> s (SAM synthase or s-adenosyl methionine synthase) and (bioS1 or bioS2 or bioS3)
L2            0 (SAM SYNTHASE OR S-ADENOSYL METHIONINE SYNTHASE) AND (BIOS1 OR
                BIOS2 OR BIOS3)

=> s synthase and (bioS1 or bioS2 or bioS3)
L3            0 SYNTHASE AND (BIOS1 OR BIOS2 OR BIOS3)

=> s (biotin or vitamin H) and (bioS1 or bioS2 or bioS3)
L4            3 (BIOTIN OR VITAMIN H) AND (BIOS1 OR BIOS2 OR BIOS3)

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5            2 DUP REM L4 (1 DUPLICATE REMOVED)

=> d l5 1-2 ibib ab

L5   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS         DUPLICATE 1
ACCESSION NUMBER:         1999:81659  CAPLUS
DOCUMENT NUMBER:          130:152652
TITLE:                    Fermentation of biotin using genetically
                          engineered microorganisms expressing genes of
                          biotin biosynthesis of Escherichia coli
INVENTOR(S):              Schroeder, Hartwig; Hauer, Bernhard
PATENT ASSIGNEE(S):       BASF A.-G., Germany
SOURCE:                   Ger. Offen., 48 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     ---------------   ----  --------      ---------------   --------
     DE 19731274        A1   19990128      DE 1997-19731274  19970722
     WO 9905285         A1   19990204      WO 1998-EP4097    19980702
```

W: CA, CN, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

EP 977867	A1	20000209	EP 1998-940118	19980702
R: BE, CH, DE, DK, FR, GB, IT, LI, NL				
JP 2001511350	T2	20010814	JP 2000-504259	19980702
US 6436681	B1	20020820	US 2000-462645	20000111

PRIORITY APPLN. INFO.: DE 1997-19731274 A 19970722
WO 1998-EP4097 W 19980702

AB A method of manufg. **biotin** using transgenic microorganisms expressing two gene of **biotin** biosynthesis (**bioS1** and **bioS2**) of Escherichia coli is described. The genes increase the efficiency of conversion of dethiobiotin to **biotin**. The genes can be expressed in a wide range of prokaryotic and microbial eukaryotic hosts or in transgenic plants. Preferably, the host has a high endogenous rate of **biotin** synthesis and is defective in the regulation of **biotin** formation. The **bioS1** and **bioS2** genes, or variants, are co-expressed with one or more copies of the **biotin** biosynthesis genes bioA, bioB, bioC, bioD, bioH, bioP, bioW, bioX, bioY, or bioR. Escherichia coli carrying a **biotin** regulon on the plasmid pHBbio14 and the **bioS1** gene on the plasmid pHS2bioS1 had a yield of **biotin** of 19.2 mg/L compared to a yield of 9.4 mg/L for cells carrying pHBbio14 alone.

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:549387 CAPLUS
DOCUMENT NUMBER: 131:169391
TITLE: Fermentation of **biotin** using genetically engineered microorganisms expressing genes of **biotin** biosynthesis of Escherichia coli
INVENTOR(S): Schroder, Hartwig
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9942591	A1	19990826	WO 1999-EP1052	19990217
W: CA, CN, IL, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19806872	A1	19990826	DE 1998-19806872	19980219
CA 2321264	AA	19990826	CA 1999-2321264	19990217
EP 1054977	A1	20001129	EP 1999-908923	19990217
R: AT, CH, DE, ES, FR, GB, IT, LI, NL, FI				
JP 2002504338	T2	20020212	JP 2000-532531	19990217

PRIORITY APPLN. INFO.: DE 1998-19806872 A 19980219
WO 1999-EP1052 W 19990217

AB The invention concerns the prodn. of **biotin** by culturing transgenic organisms expressing at least two Escherichia coli genes, the methionine adenosyltransferase gene metK and one of the **biotin** biosynthesis genes (**bioS1, bioS2, bioS3**) or their functional variants; the synthesized **biotin** is isolated from the biomass as end-product. Regulation deficient prokaryotic and eukaryotic host organisms are used. One or more copies of the metK and **bioS1/bioS2/bioS3** genes can be coexpressed with one or more copies of the **biotin** biosynthesis genes bioA, bioB, bioC, bioD, bioF bioH, bioP, bioW, bioX, bioY, bioR individually or in combination. Escherichia coli carrying a **biotin** regulon on

the plasmid pHBbio14 was transformed with plasmids contg. pHS1 and **bioS1** or pHS1, **bioS1** and metK; the non-transformed cells produced 11 mg/mL **biotin**, while overexpression resulted 45 and 52 mg/mL resp.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> s (gene or dna or nucleic acid) and (bioS1 or bioS2 or bioS3)
   2 FILES SEARCHED...
L6            3 (GENE OR DNA OR NUCLEIC ACID) AND (BIOS1 OR BIOS2 OR BIOS3)

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7            2 DUP REM L6 (1 DUPLICATE REMOVED)

=> d l7 1-2

L7   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2003 ACS         DUPLICATE 1
AN   1999:81659  CAPLUS
DN   130:152652
TI   Fermentation of biotin using genetically engineered microorganisms
     expressing genes of biotin biosynthesis of Escherichia coli
IN   Schroeder, Hartwig; Hauer, Bernhard
PA   BASF A.-G., Germany
SO   Ger. Offen., 48 pp.
     CODEN: GWXXBX
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   DE 19731274        A1   19990128      DE 1997-19731274 19970722
     WO 9905285         A1   19990204      WO 1998-EP4097   19980702
         W:  CA, CN, JP, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     EP 977867          A1   20000209      EP 1998-940118   19980702
         R:  BE, CH, DE, DK, FR, GB, IT, LI, NL
     JP 2001511350      T2   20010814      JP 2000-504259   19980702
     US 6436681         B1   20020820      US 2000-462645   20000111
PRAI DE 1997-19731274   A    19970722
     WO 1998-EP4097     W    19980702

L7   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2003 ACS
AN   1999:549387  CAPLUS
DN   131:169391
TI   Fermentation of biotin using genetically engineered microorganisms
     expressing genes of biotin biosynthesis of Escherichia coli
IN   Schroder, Hartwig
PA   BASF Aktiengesellschaft, Germany
SO   PCT Int. Appl., 64 pp.
     CODEN: PIXXD2
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   WO 9942591         A1   19990826      WO 1999-EP1052   19990217
         W:  CA, CN, IL, JP, KR, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     DE 19806872        A1   19990826      DE 1998-19806872 19980219
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     CA 2321264        AA   19990826       CA 1999-2321264  19990217
     EP 1054977        A1   20001129       EP 1999-908923   19990217
         R:  AT, CH, DE, ES, FR, GB, IT, LI, NL, FI
     JP 2002504338     T2   20020212       JP 2000-532531   19990217
PRAI DE 1998-19806872  A    19980219
     WO 1999-EP1052    W    19990217
RE.CNT  6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> s (bioS1 or bioS2 or bioS3)
L8            4 (BIOS1 OR BIOS2 OR BIOS3)

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9            3 DUP REM L8 (1 DUPLICATE REMOVED)

=> d l8 1-3 ibib ab

L8   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         1999:549387  CAPLUS
DOCUMENT NUMBER:          131:169391
TITLE:                    Fermentation of biotin using genetically engineered
                          microorganisms expressing genes of biotin biosynthesis
                          of Escherichia coli
INVENTOR(S):              Schroder, Hartwig
PATENT ASSIGNEE(S):       BASF Aktiengesellschaft, Germany
SOURCE:                   PCT Int. Appl., 64 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 9942591         A1   19990826       WO 1999-EP1052   19990217
         W:  CA, CN, IL, JP, KR, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     DE 19806872        A1   19990826       DE 1998-19806872 19980219
     CA 2321264         AA   19990826       CA 1999-2321264  19990217
     EP 1054977         A1   20001129       EP 1999-908923   19990217
         R:  AT, CH, DE, ES, FR, GB, IT, LI, NL, FI
     JP 2002504338      T2   20020212       JP 2000-532531   19990217
PRIORITY APPLN. INFO.:                   DE 1998-19806872 A  19980219
                                         WO 1999-EP1052   W  19990217
AB   The invention concerns the prodn. of biotin by culturing transgenic
     organisms expressing at least two Escherichia coli genes, the methionine
     adenosyltransferase gene metK and one of the biotin biosynthesis genes (
     bioS1, bioS2, bioS3) or their functional
     variants; the synthesized biotin is isolated from the biomass as
     end-product.  Regulation deficient prokaryotic and eukaryotic host
     organisms are used.  One or more copies of the metK and bioS1/
     bioS2/bioS3 genes can be coexpressed with one or more
     copies of the biotin biosynthesis genes bioA, bioB, bioC, bioD, bioF bioH,
     bioP, bioW, bioX, bioY, bioR individually or in combination.  Escherichia
     coli carrying a biotin regulon on the plasmid pHBbio14 was transformed
     with plasmids contg. pHS1 and bioS1 or pHS1, bioS1 and
     metK; the non-transformed cells produced 11 mg/mL biotin, while
     overexpression resulted 45 and 52 mg/mL resp.
REFERENCE COUNT:          6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:81659 CAPLUS
DOCUMENT NUMBER: 130:152652
TITLE: Fermentation of biotin using genetically engineered microorganisms expressing genes of biotin biosynthesis of Escherichia coli
INVENTOR(S): Schroeder, Hartwig; Hauer, Bernhard
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 48 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19731274	A1	19990128	DE 1997-19731274	19970722
WO 9905285	A1	19990204	WO 1998-EP4097	19980702
W: CA, CN, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 977867	A1	20000209	EP 1998-940118	19980702
R: BE, CH, DE, DK, FR, GB, IT, LI, NL				
JP 2001511350	T2	20010814	JP 2000-504259	19980702
US 6436681	B1	20020820	US 2000-462645	20000111

PRIORITY APPLN. INFO.: DE 1997-19731274 A 19970722
WO 1998-EP4097 W 19980702

AB A method of manufg. biotin using transgenic microorganisms expressing two gene of biotin biosynthesis (**bioS1** and **bioS2**) of Escherichia coli is described. The genes increase the efficiency of conversion of dethiobiotin to biotin. The genes can be expressed in a wide range of prokaryotic and microbial eukaryotic hosts or in transgenic plants. Preferably, the host has a high endogenous rate of biotin synthesis and is defective in the regulation of biotin formation. The **bioS1** and **bioS2** genes, or variants, are co-expressed with one or more copies of the biotin biosynthesis genes bioA, bioB, bioC, bioD, bioH, bioP, bioW, bioX, bioY, or bioR. Escherichia coli carrying a biotin regulon on the plasmid pHBbio14 and the **bioS1** gene on the plasmid pHS2bioS1 had a yield of biotin of 19.2 mg/L compared to a yield of 9.4 mg/L for cells carrying pHBbio14 alone.

L8 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1977:117199 CAPLUS
DOCUMENT NUMBER: 86:117199
TITLE: Life support system with autonomous control employing plant photosynthesis
AUTHOR(S): Gitel'zon, I. I.; Terskov, I. A.; Kovrov, B. G.; Sidko, F. Ya.; Lisovskii, G. M.; Okladnikov, Yu. N.; Belyanin, V. N.; Trubachev, I. N.; Rerberg, M. S.
CORPORATE SOURCE: L. V. Kinenskii Phys. Inst., Krasnoyarsk, USSR
SOURCE: Acta Astronautica (1976), 3(9-10), 633-50
CODEN: AASTCF; ISSN: 0094-5765
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This research was aimed to obtaining a closed control system, that was achieved by placing all the technol. processes providing for human vital activities within the hermetically sealed space, and by transferring the entire control and guidance of these processes to people inhabiting the system. In contrast to existing biol. life support systems, man was included not only as a participant of metab., but as an operator who is the central figure in collecting information, making decisions and

controlling all technol. processes. To tackle this problem, the BIOS-3 exptl. complex was created for performing long-term expts. using different structures of biol. life-support system. The expt. lasted 6 months and consisted of 3 stages. During the 1st stage the system was comprised of 2 equiv. phytotrons with the culture of wheat and an assortment of vegetable plants, and the living compartment. At the second stage, one of the phytotrons was removed while a compartment of Chlorella cultivators was introduced. The 3rd stage differed from the second, the former using wheat phytotron and the latter employing phytotron with an assortment of vegetable cultures. Three men inhabited the system simultaneously. The expt. demonstrated that a biol. life suppot system controlled autonomously from the inside is feasible within a small confined space. However, immunol. and microbiol. research shows, that the medium created by the system is not fully adequate for man.

=> s (bioS1 or bioS2 or bioS3) and biotin
L10 3 (BIOS1 OR BIOS2 OR BIOS3) AND BIOTIN

=> s (SAM synthase or s-adenosyl methionine synthase) and (dna or nucleic acid or gene)
2 FILES SEARCHED...
L11 28 (SAM SYNTHASE OR S-ADENOSYL METHIONINE SYNTHASE) AND (DNA OR NUCLEIC ACID OR GENE)

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12 18 DUP REM L11 (10 DUPLICATES REMOVED)

=> s l12 and escherichia coli
L13 1 L12 AND ESCHERICHIA COLI

=> d l13 ibib ab

L13 ANSWER 1 OF 1 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
ACCESSION NUMBER: 1999-13501 BIOTECHDS
TITLE: Production of biotin by expressing **S-adenosyl-methionine-synthase** and second biotin synthesis **gene** in host cells; recombinant vitamin production via vector plasmid pHBbio14 or plasmid pHS1metKbioS-1-mediated enzyme and bioS-1 **gene** transfer and expression in **Escherichia coli**
AUTHOR: Schroeder H
PATENT ASSIGNEE: BASF
LOCATION: Ludwigshafen, Germany.
PATENT INFO: DE 19806872 26 Aug 1999
APPLICATION INFO: DE 1998-1006872 19 Feb 1998
PRIORITY INFO: DE 1998-1006872 19 Feb 1998
DOCUMENT TYPE: Patent
LANGUAGE: German
OTHER SOURCE: WPI: 1999-480095 [41]
AB A method for the production of biotin (I), which consists of expressing, in a prokaryotic or eukaryotic host capable of producing (I), an **S-adenosyl-methionine-synthase** 1,155 bp **DNA** sequence (1) and at least one other biotin synthesis **gene** from bioS-1, -2 or -3 which have 1,206 (2), 1,215 (3) and 1,221 (4) bp **DNA** sequences, respectively, is new. Also claimed are: an agent construct containing (1) and at least one of (2), (3) or (4), or their functional variants, analogs or derivatives, linked to one or more regulatory signals for increased **gene** and/or protein expression; organisms containing the construct; and the use of the bioS-3 **gene**, or its variants, analogs or derivatives alone or in combination with other biotin synthesis genes for the

production of (I). (I) is an essential vitamin (vitamin H) for most animals and some microorganisms. In an example, vector plasmid pHBbio14 and plasmid pHS1metKbioS-1 (containing the **S-adenosyl -methionine-synthase** metK and bioS-1 genes of **Escherichia coli**) were used to transform E. coli W3110 cells. The cells were cultures overnight in a glycerol-containing culture medium and IPTG and arabinose were added to induced **gene** expression. (47pp)

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=> schroeder hartwig/au
SCHROEDER IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s schroeder hartwig/au
L14         26 SCHROEDER HARTWIG/AU

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15         21 DUP REM L14 (5 DUPLICATES REMOVED)

=> d l15 1-5 ibib ab

L15  ANSWER 1 OF 21  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2003:352115  CAPLUS
TITLE:                   Genes for DNA-Replikations-und the pathogenesis
                         proteins code [Machine Translation].
INVENTOR(S):             Zelder, Oskar; Pompejus, Markus; Schroeder,
                         Hartwig; Kroeger, Burkhard; Klopprogge, Corinna;
                         Haberhauer, Gregor
PATENT ASSIGNEE(S):      BASF A.-G., Germany
SOURCE:                  Ger. Offen., 258 pp.
                         CODEN: GWXXBX
DOCUMENT TYPE:           Patent
LANGUAGE:                German
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     ---------------   ----  ---------     ---------------   --------
     DE 10154246        A1   20030508      DE 2001-10154246  20011105
PRIORITY APPLN. INFO.:                   DE 2001-10154246    20011105
AB   [Machine Translation of Descriptors]. The invention concerns new nucleic
     acid mols., their use to the construction of genetically improved
     microorganisms and procedure for the prodn. of fine chems., in particular
     amino acids with the help of these genetically improved microorganisms.

L15  ANSWER 2 OF 21  CAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2003:352114  CAPLUS
TITLE:                   Genes those for membeansynthese membeansynthese-und
                         membrane transport proteins code [Machine
                         Translation].
INVENTOR(S):             Zelder, Oskar; Pompejus, Markus; Schroeder,
                         Hartwig; Kroeger, Burkhard; Klopprogge, Corinna;
                         Haberhauer, Gregor
PATENT ASSIGNEE(S):      BASF A.-G., Germany
SOURCE:                  Ger. Offen., 20 pp.
                         CODEN: GWXXBX
DOCUMENT TYPE:           Patent
LANGUAGE:                German
FAMILY ACC. NUM. COUNT:  1
```

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10154179	A1	20030508	DE 2001-10154179	20011105

PRIORITY APPLN. INFO.: DE 2001-10154179 20011105

AB [Machine Translation of Descriptors]. The invention concerns nucleic acid mols., their use to the construction of genetically improved microorganisms and procedure for the prodn. of fine chems., in particular amino acids with the help of these genetically improved microorganisms.

L15 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:352113 CAPLUS
TITLE: Genes those for new proteins code [Machine Translation].
INVENTOR(S): Zelder, Oskar; Pompejus, Markus; **Schroeder, Hartwig**; Kroeger, Burkhard; Klopprogge, Corinna; Haberhauer, Gregor
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 20 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10154177	A1	20030508	DE 2001-10154177	20011105

PRIORITY APPLN. INFO.: DE 2001-10154177 20011105

AB [Machine Translation of Descriptors]. The invention concerns new nucleic acid mols., their use to the construction of genetically improved microorganisms and procedure for the prodn. of fine chems., in particular amino acids with the help of these genetically improved microorganisms.

L15 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:504549 CAPLUS
DOCUMENT NUMBER: 137:58680
TITLE: Genes of Corynebacterium glutamicum useful for microbial engineering for fermentative production of compounds and for diagnosing infection
INVENTOR(S): Pompejus, Markus; Kroeger, Burkhard; Zelder, Oskar; **Schroeder, Hartwig**
PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 176 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002051231	A1	20020704	WO 2000-EP13143	20001222

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: WO 2000-EP13143 20001222

AB Twenty-three isolated nucleic acid mols., designated MP nucleic acid mols., which encode novel MP proteins from Corynebacterium glutamicum are described. The invention also provides antisense nucleic acid mols., recombinant expression vectors contg. MP nucleic acid mols., and host cells into which the expression vectors have been introduced. The invention still further provides isolated MP proteins, mutated MP proteins, fusion proteins, antigenic peptides and methods for the improvement of prodn. of a desired compd. from C. glutamicum based on genetic engineering of MP genes in this organism.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:240976 CAPLUS

DOCUMENT NUMBER: 136:258297

TITLE: Use of replication-incompetent methylated DNA for mutagenesis in coryneform bacteria

INVENTOR(S): Pompejus, Markus; **Schroeder, Hartwig;** Kroeger, Burkhard; Zelder, Oskar

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002024917	A2	20020328	WO 2001-EP10805	20010919
WO 2002024917	A3	20020627		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10046870	A1	20020328	DE 2000-10046870	20000920
AU 2002013937	A5	20020402	AU 2002-13937	20010919

PRIORITY APPLN. INFO.: DE 2000-10046870 A 20000920
WO 2001-EP10805 W 20010919

AB The invention relates to a method for producing corynebacteria that contain one or more modified genomic sequences, characterized by using a vector that does not replicate in corynebacteria and whose nucleic acid is not recognized as foreign by the corynebacteria. The DNA is methylated with a cognate DNA methyltransferase that protects it from host restriction enzymes. The replicon that us used to propagate the DNA does not function in coryneform bacteria. Selecting transformed cells for a marker on the transforming DNA forces integration. Integration can be directed by the inclusion of a host DNA sequence. The plasmid pTc15AcglIM carrying the cglIM gene for the Corynebacterium glutamicum was introduced into Escherichia coli. Expression of the cglIM gene resulted in the DNA having a C. glutamicum-specific methylation profile. A second group of plasmids derived from pSL18 and carrying the ddh gene were similarly methylated in E. coli. Transformation of C. glutamicum with the methylated pSL18 deriv. resulted in the appearance of transformants with an inactivated ddh gene. No transformants were found when unmethylated plasmids were used.

=> d l15 6-10 ibib ab

L15 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:72076 CAPLUS
DOCUMENT NUMBER: 136:118605
TITLE: Preparation of tocotrienolquinone cyclization products with an antihypercholesterol effect
INVENTOR(S): Baldenius, Kai-Uwe; **Schroeder, Hartwig;** Kraemer, Klaus; Schein, Karin; Stuermer, Rainer
PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002006261	A1	20020124	WO 2001-EP8163	20010713
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10034233	A1	20020124	DE 2000-10034233	20000714
EP 1301501	A1	20030416	EP 2001-969391	20010713
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: DE 2000-10034233 A 20000714
WO 2001-EP8163 W 20010713
OTHER SOURCE(S): CASREACT 136:118605; MARPAT 136:118605
AB The invention relates to the use of at least one component of I [R1, R2, R3, R4 = H, C1-6-alkyl] prepd. from tocotrienols II via oxidn. and cyclization of tocotrienolquinones III. Thus, I (R1 = H, R2 - R4 = Me) was prepd. from II (R1 = H, R2 - R4 = Me) via oxidn. with ceric ammonium nitrate in aq. EtOH followed by cyclization of the resulting quinone III (R1 = H, R2 - R4 = Me) with CsCO3 in CH2Cl2. The invention also relates to the use of I for medical purposes. I (R1 = H, R2 - R4 = Me) showed 50% inhibition of cholesterol biosynthesis at 10-6 M comparable to .gamma.-tocotrienol and .gamma.-tocotrienolquinone.
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:671716 CAPLUS
DOCUMENT NUMBER: 137:180754
TITLE: Procedure for the modification of the genome of gram-positive bacteria with a new conditional negatively dominant marker gene
INVENTOR(S): Pompejus, Markus; Kroeger, Burkhard; **Schroeder, Hartwig;** Zelder, Oskar
PATENT ASSIGNEE(S): BASF AG, Germany
SOURCE: Ger. Offen., 12 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10109996	A1	20020905	DE 2001-10109996	20010301
WO 2002070685	A2	20020912	WO 2002-EP2133	20020228
WO 2002070685	A3	20030123		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2001-10109996 A 20010301

AB The invention concerns a new procedure for the modification of genomes of gram-pos. bacteria and construction of new vectors. In particular the invention concerns a procedure for the modification of Corynebacteria or Brevibacterium with the help of a new conditional neg. dominant. marker gene.

L15 ANSWER 8 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2002:205436 BIOSIS

DOCUMENT NUMBER: PREV200200205436

TITLE: Effects of feeding various tocotrienol sources on plasma lipids and aortic atherosclerotic lesions in cholesterol-fed rabbits.

AUTHOR(S): Hasselwander, Oliver (1); Kraemer, Klaus; Hoppe, Peter P.; Oberfrank, Uwe; Baldenius, Kai; **Schroeder, Hartwig** ; Kaufmann, Wolfgang; Bahnemann, Rainer; Nowakowsky, Brigitte

CORPORATE SOURCE: (1) BASF Aktiengesellschaft, Carl-Bosch Strasse 38, D-67056, Ludwigshafen: oliver.hasselwander@basf-ag.de Germany

SOURCE: Food Research International, (2002) Vol. 35, No. 2-3, pp. 245-251. http://www.elsevier.com/locate/foodres. print. ISSN: 0963-9969.

DOCUMENT TYPE: Article

LANGUAGE: English

AB Tocotrienols exert hypocholesterolaemic and antioxidant effects, and may hence have anti-atherogenic properties. Therefore, the aim of this study was to investigate the cholesterol-lowering and anti-atherogenic effects of tocotrienols in cholesterol-fed rabbits. Rabbits were fed a basal diet (control) supplemented with gamma-tocotrienol, gamma-tocotrienol, gamma-tocotrienyl acetate, mixed tocotrienols or alpha-tocotrienol for 12 weeks. All treatments resulted in significant increases in plasma tocotrienols. None of the treatments, however, had significant effects on serum lipids or size of atherosclerotic lesions. A trend towards a decrease in plasma cholesterol was observed following gamma-tocotrienol treatment (-22%) after 6 weeks. The decrease was mainly attributable to a reduction in LDL cholesterol (23%), whereas HDL cholesterol increased (14%). This trend was mirrored in a non-significant reduction in lesion area (20%). Our results demonstrate that tocotrienols are absorbed, but have little effect on plasma lipids and atherosclerosis in cholesterol-fed rabbits.

L15 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:676795 CAPLUS

DOCUMENT NUMBER: 135:222397

TITLE: Corynebacterium glutamicum genes encoding metabolic

pathway proteins

INVENTOR(S): Pompejus, Markus; Kroeger, Burkhard; **Schroeder, Hartwig**; Zelder, Oskar; Haberhauer, Gregor; Kim, Jun-Won; Lee, Heung-Shick; Hwang, Byung-Joon

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 316 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001066573	A2	20010913	WO 2000-IB2035	20001222
WO 2001066573	A3	20020510		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261718	A2	20021204	EP 2000-987602	20001222
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2000017148	A	20030311	BR 2000-17148	20001222

PRIORITY APPLN. INFO.:

US 2000-187970P	P	20000309
US 2000-606740	A	20000623
WO 2000-IB2035	W	20001222

AB Isolated nucleic acid mols., designated MP nucleic acid mols., are provided which encode novel metabolic pathway (MP) proteins from Corynebacterium glutamicum. The invention also provides antisense nucleic acid mols., recombinant expression vectors contg. MP nucleic acid mols., and host cells into which the expression vectors have been introduced. The invention still further provides isolated MP proteins, mutated MP proteins, fusion proteins, antigenic peptides and methods for the improvement of prodn. of a desired compd. from C. glutamicum based on genetic engineering of MP genes in this organism. In particular, genes metZ (O-acetylhomoserine sulfhydrylase), metC (cystathionine .beta.-lyase) and RXA00657 (encoding a transcriptional regulator) are provided which can be used to improve prodn. of amino acids such as methionine and lysine.

L15 ANSWER 10 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2000:438324 BIOSIS

DOCUMENT NUMBER: PREV200000438324

TITLE: Multistep mechanism of substrate binding determines chaperone activity of Hsp70.

AUTHOR(S): Mayer, Matthias P.; **Schroeder, Hartwig**; Ruediger, Stefan; Paal, Klaus; Laufen, Thomas; Bukau, Bernd (1)

CORPORATE SOURCE: (1) Institut fuer Biochemie und Molekularbiologie, Universitaet Freiburg, Hermann-Herder-Str. 7, 79104-D, Freiburg Germany

SOURCE: Nature Structural Biology, (July, 2000) Vol. 7, No. 7, pp. 586-593. print.
ISSN: 1072-8368.

DOCUMENT TYPE: Article

LANGUAGE: English

SUMMARY LANGUAGE: English

AB The 70 kDa heat shock proteins (the Hsp70 family) assist refolding of their substrates through ATP-controlled binding. We have analyzed mutants

of DnaK, an Hsp70 homolog, altered in key residues of its substrate binding domain. Substrate binding occurs by a dynamic mechanism involving: a hydrophobic pocket for a single residue that is crucial for affinity, a two-layered closing device involving independent action of an alpha-helical lid and an arch, and a superimposed allosteric mechanism of ATP-controlled opening of the substrate binding cavity that operates largely through a beta-structured subdomain. Correlative evidence from mutational analysis suggests that the ADP and ATP states of DnaK differ in the frequency of the conformational changes in the alpha-helical lid and beta-domain that cause opening of the substrate binding cavity. The affinity for substrates, as defined by this mechanism, determines the efficiency of DnaJ-mediated and ATP hydrolysis mediated locking-in of substrates and chaperone activity of DnaK.

=> d l15 11-21

L15 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1999:81659 CAPLUS
DN 130:152652
TI Fermentation of biotin using genetically engineered microorganisms expressing genes of biotin biosynthesis of Escherichia coli
IN **Schroeder, Hartwig**; Hauer, Bernhard
PA BASF A.-G., Germany
SO Ger. Offen., 48 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19731274	A1	19990128	DE 1997-19731274	19970722
	WO 9905285	A1	19990204	WO 1998-EP4097	19980702
	W: CA, CN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 977867	A1	20000209	EP 1998-940118	19980702
	R: BE, CH, DE, DK, FR, GB, IT, LI, NL				
	JP 2001511350	T2	20010814	JP 2000-504259	19980702
	US 6436681	B1	20020820	US 2000-462645	20000111
PRAI	DE 1997-19731274	A	19970722		
	WO 1998-EP4097	W	19980702		

L15 ANSWER 12 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:57824 BIOSIS
DN PREV199900057824
TI Mutations in the DnaK chaperone affecting interaction with the DnaJ cochaperone.
AU Gaessler, Claudia; Buchberger, Alexander; Laufen, Thomas; Mayer, Matthias P.; **Schroeder, Hartwig**; Valencia, Alfonso; Bukau, Bernd (1)
CS (1) Inst. Biochem. Molekularbiol., Univ. Freiburg, Hermann-Herder-Str. 7, D-79104 Freiburg Germany
SO Proceedings of the National Academy of Sciences of the United States of America, (Dec. 22, 1998) Vol. 95, No. 26, pp. 15229-15234.
ISSN: 0027-8424.
DT Article
LA English

L15 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
AN 1996:536112 CAPLUS
DN 125:188765
TI Substrate shuttling between the DnaK and GroEL systems indicates a chaperone network promoting protein folding

AU Buchberger, Alexander; **Schroeder, Hartwig**; Hesterkamp, Thomas; Schoenfeld, Hans-Joachim; Bukau, Bernd
CS Zentrum Molekulare Biologie, Univ. Heidelberg, Heidelberg, D69120, Germany
SO Journal of Molecular Biology (1996), 261(3), 328-333
CODEN: JMOBAK; ISSN: 0022-2836
PB Academic
DT Journal
LA English

L15 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 2
AN 1995:697779 CAPLUS
DN 123:106430
TI Nucleotide-induced conformational changes in the ATPase and substrate binding domains of the DnaK chaperone provide evidence for interdomain communication
AU Buchberger, Alexander; Theyssen, Holger; **Schroeder, Hartwig**; McCarty, John S.; Virgallita, Giuseppe; Milkereit, Philipp; Reinstein, Jochen; Bukau, Bernd
CS Zent. Mol. Biol., Univ. Heidelberg, Heidelberg, D-69120, Germany
SO Journal of Biological Chemistry (1995), 270(28), 16903-10
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Bio logy
DT Journal
LA English

L15 ANSWER 15 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1995:349735 CAPLUS
DN 122:126742
TI The DnaK chaperone system of Escherichia coli: quaternary structures and interactions of the DnaK and GrpE components
AU Schoenfeld, Hans-Joachim; Schmidt, Dieter; **Schroeder, Hartwig**; Bukau, Bernd
CS Pharmaceutical Res.-New Technologies, Hoffmann-La Roche Limited, Basel, CH-4002, Switz.
SO Journal of Biological Chemistry (1995), 270(5), 2183-9
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English

L15 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
AN 1995:173579 CAPLUS
DN 122:3717
TI The ATP hydrolysis-dependent reaction cycle of the Escherichia coli Hsp70 system - DnaK, DnaJ, and GrpE
AU Szabo, Alexander; Langer, Thomas; **Schroeder, Hartwig**; Flanagan, John; Bukau, Bernd; Hartl, F. Ulrich
CS Howard Hughes Med. Inst., Memorial Sloan-Kettering Cancer Cent., New York, NY, 10021, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1994), 91(22), 10345-9
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English

L15 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
AN 1994:428446 CAPLUS
DN 121:28446
TI A conserved loop in the ATPase domain of the DnaK chaperone is essential for stable binding of GrpE
AU Buchberger, Alexander; **Schroeder, Hartwig**; Buettner, Martina; Valencia, Alfonso; Bukau, Bernd

CS Zent. Mol. Biol., Univ. Heidelberg, Heidelberg, 69117, Germany
SO Nature Structural Biology (1994), 1(2), 95-101
CODEN: NSBIEW; ISSN: 1072-8368
DT Journal
LA English

L15 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 5
AN 1994:2936 CAPLUS
DN 120:2936
TI DnaK, DnaJ and GrpE form a cellular chaperone machinery capable of repairing heat-induced protein damage
AU **Schroeder, Hartwig**; Langer, Thomas; Hartl, Franz Ulrich; Bukau, Bernd
CS Zent. Mol. Biol., Univ. Heidelberg, Heidelberg, D69120, Germany
SO EMBO Journal (1993), 12(11), 4137-44
CODEN: EMJODG; ISSN: 0261-4189
DT Journal
LA English

L15 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1988:170639 CAPLUS
DN 108:170639
TI Lubricant preparation
IN **Schroeder, Hartwig**
PA Tribol Lubricants G.m.b.H., Fed. Rep. Ger.
SO Ger. Offen., 3 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3610205	A1	19871001	DE 1986-3610205	19860326
	AU 8770585	A1	19871001	AU 1987-70585	19870324
	AU 589755	B2	19891019		
	EP 239088	A2	19870930	EP 1987-104381	19870325
	EP 239088	A3	19880720		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	US 4786423	A	19881122	US 1987-30090	19870325
	JP 62275198	A2	19871130	JP 1987-72966	19870326
	JP 03061717	B4	19910920		
	CA 1293243	A1	19911217	CA 1987-541296	19870703
PRAI	DE 1986-3610205		19860326		

L15 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1983:105828 CAPLUS
DN 98:105828
TI Biocides in humans. Residues in human milk and organs
AU Mueller, Bernd; **Schroeder, Hartwig**
CS Chem. Untersuchungsamt Stadt Hagen, Hagen, Fed. Rep. Ger.
SO Ernaehrungs-Umschau (1982), 29(11), 359-62
CODEN: ERUMAT; ISSN: 0014-021X
DT Journal
LA German

L15 ANSWER 21 OF 21 CAPLUS COPYRIGHT 2003 ACS
AN 1979:20921 CAPLUS
DN 90:20921
TI Biocides in human fat tissue and human milk. Discussion on the infant nutrition problem
AU Mueller, Bernd; **Schroeder, Hartwig**
CS Chem. Untersuchungsamt, Hagen, Fed. Rep. Ger.
SO Ernaehrungs-Umschau (1978), 25(7), 205-9

CODEN: ERUMAT; ISSN: 0014-021X
DT Journal
LA German

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FILE 'MEDLINE, CAPLUS, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH' ENTERED AT 11:16:38 ON 09 MAY 2003

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L3            0 S SYNTHASE AND (BIOS1 OR BIOS2 OR BIOS3)
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FULL ESTIMATED COST	163.79	164.00

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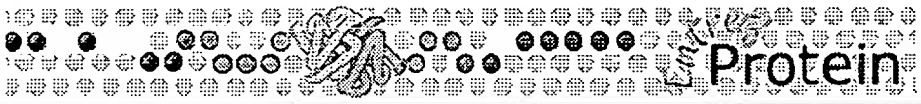

☐ 1: F65063. Cysteine sulfinat...[gi:7448205] BLink, Domains, Links

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LOCUS       F65063                 401 aa            linear   BCT 01-MAR-2002
DEFINITION  Cysteine sulfinate desulfinase (EC 4.4.1.-) (CSD) - Escherichia
            coli (strain K-12).
ACCESSION   F65063
VERSION     F65063  GI:7448205
DBSOURCE    pir: locus F65063;

            summary: #length 401 #molecular-weight 43234 #checksum 6998
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            superfamily: nifS protein
            ;
            PIR dates: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change
            01-Mar-2002
            .
KEYWORDS    carbon-sulfur lyase.
SOURCE      Escherichia coli
  ORGANISM  Escherichia coli
            Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
            Enterobacteriaceae; Escherichia.
REFERENCE   1  (residues 1 to 401)
  AUTHORS   Blattner,F.R., Plunkett III,G., Bloch,C.A., Perna,N.T., Burland,V.,
            Riley,M., Collado-Vides,J., Glasner,J.D., Rode,C.K., Mayhew,G.F.,
            Gregor,J., Davis,N.W., Kirkpatrick,H.A., Goeden,M.A., Rose,D.J.,
            Mau,B. and Shao,Y.
  TITLE     The complete genome sequence of Escherichia coli K-12
  JOURNAL   Science 277 (5331), 1453-1474 (1997)
  MEDLINE   97426617
   PUBMED   9278503
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                     /db_xref="taxon:562"
     Protein         1..401
                     /product="Cysteine sulfinate desulfinase (CSD)"
                     /EC_number="4.4.1.-"
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       61 ltaryeaare kvaqllnapd dktivwtrgt tesinmvaqc yarprlqpgd eiivsvaehh
      121 anlvpwlmva qqtgakvvkl plnaqrlpdv dllpelitpr srilalgqms nvtggcpdla
      181 raitfahsag mvvmvdgaqg avhfpadvqq ldidfyafsg hklygptgig vlygkselle
      241 amspwlgggk mvhevsfdgf ttqsapwkle agtpnvagvi glsaalewla dydinqaesw
      301 srslatlaed alakrpgfrs frcqdsslla fdfagvhhsd mvtllaeygi alragqhcaq
      361 pllaelgvtg tlrasfapyn tksdvdalvn avdralellv d
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May 2 2003 16:47:12

☐ **1:** H64925. yr68a10.r1 Soares...[gi:1023665] Links

IDENTIFIERS

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EST name:	yr68a10.r1
GenBank Acc:	H64925
GenBank gi:	1023665
GDB Id:	3783267

CLONE INFO

Clone Id:	IMAGE:210426 (5')
Insert length:	1847
DNA type:	cDNA

PRIMERS

Sequencing:	M13RP1
PolyA Tail:	Unknown

SEQUENCE

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TGAGCCAGACTGATGGAATTGACTGACCTATCTTACAGCTATAGGACTGTAATTGAGATC
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TTTGTGTTAGGATAGTAAATTACCTTGAAAACTGGAAACACATTTTAACAACATTAAATT
GGGATTTATTCATTTAGTGTAGGATACTGTAGTTCCTAGGTTTGTAAACTGTGGGCAAGA
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TTTTGTTATTAAAAATTGAGCNGGGAGGTTNGGAGGGTNCCTT

Quality: High quality sequence stops at base: 324

Entry Created:	Oct 18 1995
Last Updated:	Oct 18 1995

COMMENTS

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High quality sequence stops: 324
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.

LIBRARY

Lib Name:	Soares fetal liver spleen 1NFLS
Organism:	Homo sapiens
Sex:	male
Organ:	Liver and Spleen
Develop. stage:	20 week-post conception fetus
Lab host:	DH10B (ampicillin resistant)
Vector:	pT7T3D (Pharmacia) with a modified polylinker
R. Site 1:	Pac I
R. Site 2:	Eco RI

Description: 1st strand cDNA was primed with a Pac I - oligo(dT) primer [5' AACTGGAAGAATTAATTAAAGATCTTTTTTTTTTTTTTTTT 3'], double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Pac I and cloned into the Pac I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo.

SUBMITTER

Name: Wilson RK
Institution: Washington University School of Medicine
Address: 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
E-mail: est@watson.wustl.edu

CITATIONS

Medline UID: 97044478
Title: Generation and analysis of 280,000 human expressed sequence tags
Authors: Hillier,L., Lennon,G., Becker,M., Bonaldo,M.F., Chiapelli,B., Chissoe,S., Dietrich,N., DuBuque,T., Favello,A., Gish,W., Hawkins,M., Hultman,M., Kucaba,T., Lacy,M., Le,M., Le,N., Mardis,E., Moore,B., Morris,M., Parsons,J., Prange,C., Rifkin,L., Rohlfing,T., Schellenberg,K., Soares,M.B., Tan,F., Thierry-Meg,J., Trevaskis,E., Underwood,K., Wohldmann,P., Waterston,R., Wilson,R., Marra,M.
Citation: Genome Res. 6 (9): 807-828 1996

MAP DATA

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L1: Entry 1 of 3 File: USPT Aug 20, 2002

US-PAT-NO: 6436681
DOCUMENT-IDENTIFIER: US 6436681 B1

TITLE: Method for producing biotin

DATE-ISSUED: August 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schroder; Hartwig	Nussloch			DE
Hauer; Bernhard	Fussgonheim			DE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
BASF Aktiengesellschaft	Ludwigshafen			DE	03

APPL-NO: 09/ 462645 [PALM]
DATE FILED: January 11, 2000

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
DE	197 31 274	July 22, 1997

PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE	102(E)-DATE
PCT/EP98/04097	July 2, 1998	WO99/05285	Feb 4, 1999	Jan 11, 2000	Jan 11, 2000

INT-CL: [07] C12 P 17/18, C12 N 9/00, C12 N 1/21, C12 N 15/52, C07 M 21/04

US-CL-ISSUED: 435/119; 435/41, 435/183, 435/252.3, 435/254.11, 435/254.2, 435/320.1, 435/440, 536/23.2
US-CL-CURRENT: 435/119; 435/183, 435/252.3, 435/254.11, 435/254.2, 435/320.1, 435/41, 435/440, 536/23.2

FIELD-OF-SEARCH: 435/183, 435/41, 435/320.1, 435/119, 435/252.3, 435/254.11, 435/254.2, 435/410

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	6361978	March 2002	Hoshino et al.	435/119

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 236 429	April 1993	EP	
0 635 572	June 1994	EP	
0 449 721	May 1997	EP	
0 806 479	November 1997	EP	
WO 94/08023	April 1994	WO	

OTHER PUBLICATIONS

Brown et al., "The Production of Biotin by Genetically Modified Micro-Organisms", Biotechnology and Genetic Engineering Reviews, vol. 9, (12/91) pp. 295-326.
DeMoll, "Biosynthesis of Biotin and Lipoic Acid" (1996), pp. 704-709.
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Zheng et al., "Catalytic Formation of a Nitrogenase Iron-Sulfur Cluster*" The Journal of Biological Chemistry, vol. 269, No. 29(1994) pp. 18723-18726.
Ifuku et al., "Flaodoxin is required for conversion of dethiobiotin to biotin in Escherichia coli" Eur. J. Biochem., vol. 224, (1994) pp. 173-178.

ART-UNIT: 1652

PRIMARY-EXAMINER: Slobodyansky; Elizabeth

ATTY-AGENT-FIRM: Keil & Weinkauf

ABSTRACT:

A gene construct comprising a biotin gene having the sequence SEQ ID No. 1 or SEQ ID No. 3, organisms which comprise this gene construct, the use of these sequences or of the gene construct for preparing biotin, and a process for preparing biotin are described.

7 Claims, 4 Drawing figures

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 6436681 B1

L1: Entry 1 of 3 File: USPT Aug 20, 2002

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DOCUMENT-IDENTIFIER: US 6436681 B1

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DATE-ISSUED: August 20, 2002

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NAME	CITY	STATE	ZIP CODE	COUNTRY
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Hauer; Bernhard	Fussgonheim			DE

US-CL-CURRENT: 435/119; 435/183, 435/252.3, 435/254.11, 435/254.2, 435/320.1, 435/41, 435/440, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 2. Document ID: WO 9942591 A1

L1: Entry 2 of 3 File: EPAB Aug 26, 1999

PUB-NO: WO009942591A1
DOCUMENT-IDENTIFIER: WO 9942591 A1
TITLE: METHOD FOR PRODUCING BIOTIN

PUBN-DATE: August 26, 1999

INVENTOR-INFORMATION:

NAME	COUNTRY
SCHROEDER, HARTWIG	DE

INT-CL (IPC): C12 N 15/54; C12 P 17/18; C12 N 9/10; C12 N 1/21
EUR-CL (EPC): C12N009/10; C12N009/10, C12P017/18

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 3. Document ID: DE 19806872 A1 JP 2002504338 W WO 9942591 A1 EP 1054977 A1 CN 1291232 A KR 2001041062 A

L1: Entry 3 of 3 File: DWPI Aug 26, 1999

DERWENT-ACC-NO: 1999-480095
DERWENT-WEEK: 200215

TITLE: Production of biotin by expressing S-adenosyl-methionine synthase and second biotin synthesis gene in host cells

INVENTOR: SCHROEDER, H

PRIORITY-DATA: 1998DE-1006872 (February 19, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 19806872 A1	August 26, 1999		047	C12N015/63
JP 2002504338 W	February 12, 2002		102	C12N015/09
WO 9942591 A1	August 26, 1999	G	000	C12N015/54
EP 1054977 A1	November 29, 2000	G	000	C12N015/54
CN 1291232 A	April 11, 2001		000	C12N015/54
KR 2001041062 A	May 15, 2001		000	C12N015/54

INT-CL (IPC): C07 D 495/04; C07 H 21/04; C12 N 1/00; C12 N 1/15; C12 N 1/19; C12 N 1/21; C12 N 5/10; C12 N 9/10; C12 N 15/09; C12 N 15/54; C12 N 15/60; C12 N 15/63; C12 P 17/18; C12 P 17/18; C12 R 1:19; C12 N 1/21; C12 R 1:19; C12 N 1/21; C12 P 17/18; C12 R 1:19; C12 P 17/18; C12 R 1:19; C12 N 1/21; C12 R 1:19

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 6436681 B1

L6: Entry 1 of 3 File: USPT Aug 20, 2002

US-PAT-NO: 6436681
DOCUMENT-IDENTIFIER: US 6436681 B1

TITLE: Method for producing biotin

DATE-ISSUED: August 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schroder; Hartwig	Nussloch			DE
Hauer; Bernhard	Fussgonheim			DE

US-CL-CURRENT: 435/119; 435/183, 435/252.3, 435/254.11, 435/254.2, 435/320.1, 435/41, 435/440, 536/23.2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

☐ 2. Document ID: WO 9942591 A1

L6: Entry 2 of 3 File: EPAB Aug 26, 1999

PUB-NO: WO009942591A1
DOCUMENT-IDENTIFIER: WO 9942591 A1
TITLE: METHOD FOR PRODUCING BIOTIN

PUBN-DATE: August 26, 1999

INVENTOR-INFORMATION:

NAME	COUNTRY
SCHROEDER, HARTWIG	DE

INT-CL (IPC): C12 N 15/54; C12 P 17/18; C12 N 9/10; C12 N 1/21
EUR-CL (EPC): C12N009/10; C12N009/10, C12P017/18

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

☐ 3. Document ID: DE 19806872 A1 JP 2002504338 W WO 9942591 A1 EP 1054977 A1 CN 1291232 A KR 2001041062 A

L6: Entry 3 of 3 File: DWPI Aug 26, 1999

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JP 2002504338 W	February 12, 2002		102	C12N015/09
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Terms	Documents
(bioS1 or bioS2 or bioS3)and synthase	3

WEST Search History

DATE: Friday, May 09, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L6	(bioS1 or bioS2 or bioS3)and synthase	3	L6
L5	(bioS1 or bioS2 or bioS3)and SAM synthase	0	L5
L4	(bioS1 or bioS2 or bioS3)and dna	1	L4
L3	(bioS1 or bioS2 or bioS3)	15	L3
L2	biotin and (bioS1 or bioS2 or bioS3)	4	L2
L1	biotin biosynthesis and (bioS1 or bioS2 or bioS3)	3	L1

END OF SEARCH HISTORY